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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,391	10/20/2003	Jun Ishihara	15162/06230	4152

24367 7590 09/01/2005

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EXAMINER

DOWLING, WILLIAM C

ART UNIT PAPER NUMBER

2851

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,391

Applicant(s)

ISHIHARA ET AL.

Examiner

William C. Dowling

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-10, 13-20, 24 and 25 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 11, 12 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 11-12, rejected under 35 U.S.C. 103(a) as being unpatentable over Milinusic et al. (6,609,798).

Milinusic et al. discloses a projection system comprising:

a light pipe homogenizing device (110);

a reflection optical system (120) being the only element with optical power

between an output of the light pipe and an image modulator (130).

Milinusic et al. does not specify shaping the light pipe similar to the display or the use of condenser lens and color filter means.

Okamori et al. teaches a projection device comprising :

a uniformizing device (3) in the form of a rod integrator having it's entrance surface conjugated with a light source including a condensing lens (21), the exit plane of the rod being analogous to that of a plane to be illuminated (Column 6 Lines 15-18);

a reflection optical system (5) for imaging the exit plane on the surface to be illuminated and having an optical power;

a projection optical system (8).

As noted in column 2 Lines 1-6, the invention may be extended to full color projection by the use of a rotary color filter preceding the light modulator, as is known in the art.

As illustrated in figure 22, the projector may be used in rear projection units, i.e. having a transmissive screen.

It would have been obvious to one skilled in the art to modify the device of Milinusic et al. by the addition a a condensing lens preceeding the light piupe to allow for efficient entry into the pipe. It further would have been obvious to modify Milinusic et al. by the addition of color filter means at some point along the optical train in order to allow for color sequential image display.

3. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Milinusic et al. as applied to claim 11 above, and further in view of Baba or Sunaga.

Milinusic et al. discloses the invention substantially as claimed but does not teach the use of reflection means as a projection means.

Baba and Sunaga teach the use of reflection means as projection means as a substitute for more common projection lens means.

It would have been obvious to one skilled in the art at the time of the invention to modify the device of Milinusic et al. by the substitution of projection mirrors for projection lenses in order to compensate for aberrations and reduce the necessary projection optical path length.

Allowable Subject Matter

4. Claims 3-10, 13-20, 24-25 are allowed.


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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Dowling whose telephone number is 571-272-2116. The examiner can normally be reached on MON-THURS.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-1750. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wc d



William Dowling
Primary Examiner